

US009636203B2

(12) United States Patent

Nicolo

(54) METHOD AND APPARATUS OF TENSION FREE INGUINAL HERNIA REPAIR RECONSTRUCTING PHYSIOLOGY USING INGUINAL HERNIA PROSTHETIC HAVING LATERAL NON-ENCIRCLING CORD LOCATING STRUCTURE

- (76) Inventor: Enrico Nicolo, Jefferson Hills, PA (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1205 days.
- (21) Appl. No.: 13/078,338
- (22) Filed: Apr. 1, 2011

(65) Prior Publication Data

US 2012/0078274 A1 Mar. 29, 2012

Related U.S. Application Data

- (63) Continuation of application No. PCT/US2009/059257, filed on Oct. 1, 2009.
- (60) Provisional application No. 61/101,702, filed on Oct. 1, 2008.
- (51) **Int. Cl.**A61F 2/02 (2006.01)

 A61F 2/00 (2006.01)

(56) References Cited

U.S. PATENT DOCUMENTS

2,671,444 A 3/1954 Pease, Jr. 4,769,038 A * 9/1988 Bendavid et al. 623/13.11

(10) Patent No.: US 9,636,203 B2 (45) Date of Patent: May 2, 2017

5,593,441 A	1/1997	Lichtenstein et al.		
5,697,978 A	12/1997	Sgro		
5,716,409 A	2/1998	Debbas		
5,813,975 A *	9/1998	Valenti 600/37		
5,824,082 A	10/1998	Brown		
6,174,320 B1	1/2001	Kugel et al.		
6,497,650 B1*	12/2002	Nicolo 600/37		
6,565,580 B1	5/2003	Beretta		
6,610,006 B1*	8/2003	Amid et al 600/37		
(Continued)				

FOREIGN PATENT DOCUMENTS

\mathbf{EP}	0719527 A1	7/1996	
WO	WO 96/14805	2/1996	
	(Continued)		

Primary Examiner — Gregory Anderson

Assistant Examiner — Christina Lauer

(74) Attorney, Agent, or Firm — Blynn L. Shideler;

Krisanne Shideler; BLK Law Group

(57) ABSTRACT

An inguinal hernia prosthesis includes a cord locating structure that provides cord protecting functions. The cord locating structure, which may be a semi-circular or other shaped recess positioned along a longitudinal peripheral edge of the prosthesis, is designed to only surround a portion of the cord, e.g. less than 180 or preferably 120 degrees, with the remaining cord circumference being positioned by the element against appropriate muscle tissue. The cord locating structure may be referenced as a non-encircling lateral cord locating structure. The prosthetic: provides tension free repair; minimizes cord damage through tissue ingrowth/strangulation effects, inadvertent suturing through the cord structure, and abrasion with the prosthetic; and minimizes size of prosthetic used in the repair; and is configured to reconstitutes the pre-hernia muscle physiology.

20 Claims, 1 Drawing Sheet

